ATTACHMENT 2

STATE OF ALASKA

SEAN PARNELL, GOVERNOR

DEPARTMENT OF FISH AND GAME
OFFICE OF THE COMMISSIONER

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SEP 15 2010

September 9, 2010

Mr. Dave Reggiani, General Manager
Prince William Sound Aquaculture Corporation
P.O. Box 1110
Cordova, AK 99574

Dear Mr. Reggiani: Dave

I am responding to your email inquiry of September 4, regarding the decision to deny permit alteration requests (PARs) for increased pink salmon releases from Armin F. Koernig (AFK), Wally Noerenberg (WNH), and Cannery Creek (CCH) hatcheries. We recognize the importance of the salmon enhancement program in Prince William Sound and its contribution to the vitality of the fisheries and local economy. We also note the Alaska Department of Fish and Game's (ADF&G) responsibilities for the ongoing sustainability of the wild stocks in the region, the management challenges created by a pink salmon resource comprised principally of enhanced production, and the uncertainties arising from recently acquired data on levels of hatchery straying into wild stock streams. In light of ADF&G's responsibilities and the interests of the hatchery association and fisheries, we seek to pursue a careful strategy to balance the risks and benefits that might attend changes to the hatchery program. ADF&G has carefully considered all of the PARs presented by Prince William Sound Aquaculture Corporation (PWSAC) and we believe that the response to the 2010 PARs has been reasonable.

In addressing responsibilities for sustained yield, ADF&G identified specific concerns related to increased hatchery production. Recent field work has discovered substantial levels of hatchery strays in some wild stock spawning populations. Straying may interfere with effective accounting for wild stock escapement and if interbreeding with wild stocks, straying hatchery fish may affect the sustainability of the wild populations. Furthermore, managing mixed-stock fisheries to meet wild stock escapement goals is made more challenging with a large hatchery component which we cannot account for in-season. In light of these considerations, ADF&G took a careful approach to the PARs presented in 2010 in both Prince William Sound and Southeast Alaska.

For 2010, PWSAC submitted PARs for sockeye salmon at Main Bay Hatchery, chum salmon at AFK, and pink salmon at AFK, WNH, and CCH hatcheries. ADF&G approved PARs to increase the releases of sockeye at Main Bay hatchery by more than 20% and to double chum salmon releases at AFK. After careful consideration, the 2010 pink salmon PARs, which proposed increasing production at AFK, WNH, and CCH by over 20% at each facility, were denied.

Increasing pink salmon releases at WNH or AFK might intensify problems for management of mixed stock fisheries and meeting escapement goals. Both of these hatcheries are located on salmon migratory corridors utilized by stocks with broad geographic origins. At current levels of release, management of the mixed stock fisheries has resulted in levels of escapements below the established goals in many even years for stocks in areas proximate to these hatcheries. Pink salmon in both the Northwestern and Southwestern districts have seen escapements below the established ranges for the even-year cycle in several recent years. While escapements to the Coghill district have been better, they have also been low in some years. ADF&G is concerned that increasing enhanced pink salmon production in these areas could increase the need to conduct aggressive fisheries to harvest the enhanced production resulting in increased pressures on the intermingled wild stocks, which may further interfere with reaching escapement goals. Furthermore, concerns regarding reaching the escapement goals are exacerbated by inability to estimate in-season the levels of hatchery straying into the wild stock spawning escapement.

Straying of hatchery pink salmon into wild stock spawning populations may also pose a potential for impact to the genetic integrity of the wild stock. A broad range of research on enhanced salmon, largely Chinook, steelhead, and coho, has indicated that introgression of hatchery salmon into wild populations may have negative effects. We appreciate the careful review that PWSAC provided, based on the resources that ADF&G presented, regarding potential genetic impacts of hatchery straying, and acknowledge that there is no research that clearly demonstrates genetic impact from pink salmon enhancement programs like PWSAC conducts. However, we are also mindful that there is no research that effectively dismisses such concerns for pink salmon enhancement. In the absence of clear proof one way or the other, we are left with significant uncertainty on a matter with high stakes for both wild stock sustainability and hatchery productivity. In light of the potential risks, we endorse a careful approach in the near term, but also recognize that lack of knowledge could be offered as a roadblock to hatchery development. To move ahead, we have started working with members of the enhancement community to identify research approaches that may reduce uncertainty and facilitate decision making.

We look forward to working with the enhancement community and anticipate ongoing cooperative efforts aimed at harmonizing salmon enhancement and the sustained yield of wild stocks.

Sincerely,

David Bedford
Deputy Commissioner

cc: The Honorable Bill Thomas, Alaska House of Representatives
Randy Ruaro, Deputy Chief of Staff, Governor's Office
Cora Campbell, Fisheries Policy Advisor, Governor's Office
Denby Lloyd, Commissioner, ADF&G

Attachment 3.

2011 PWSAC Pink Salmon Permit Alteration Requests - Historical Marine Survival Rates

Species	Pink

Average of Marine Survival	Hatchery			
Return Year	AFK	CCH	WNH	Grand Total
1977	4.40%			4.40%
1978	1.40%			1.40%
1979	3.26%			3.26%
1980	6.56%	3.20%		4.88%
1981	10.47%	5.25%		7.86%
1982	7.36%	3.59%		5.47%
1983	5.31%	3.37%		4.34%
1984	3.20%	5.15%		4.18%
1985	6.55%	8.31%		7.43%
1986	4.79%	2.34%		3.57%
1987	6.77%	3.83%	8.75%	6.45%
1988	5.23%	0.53%	5.09%	3.62%
1989	2.46%	5.99%	2.98%	3.81%
1990	4.31%	4.46%	8.57%	5.78%
1991	4.97%	6.22%	5.18%	5.46%
1992	2.13%	1.21%	0.98%	1.44%
1993	1.41%	0.63%	0.92%	0.99%
1994	1.57%	6.75%	3.54%	3.95%
1995	1.06%	6.20%	1.51%	2.92%
1996	1.63%	5.14%	3.15%	3.31%
1997	6.42%	4.30%	3.65%	4.79%
1998	13.83%	5.35%	8.03%	9.07%
1999	8.25%	5.87%	9.13%	7.75%
2000	5.19%	4.96%	6.83%	5.66%
2001	3.37%	1.60%	6.19%	3.72%
2002	5.16%	1.14%	4.40%	3.57%
2003	4.53%	5.98%	16.80%	9.10%
2004	3.57%	2.04%	2.26%	2.62%
2005	5.80%	9.90%	8.36%	8.02%
2006	3.97%	2.30%	4.84%	3.70%
2007	9.87%	5.38%	8.89%	8.05%
2008	3.41%	7.80%	11.32%	7.51%
2009	7.43%	2.53%	2.38%	4.11%
2010	9.50%	13.82%	13.47%	12.27%
2011				
1998 - 2009 Average	6.20%	4.57%	7.45%	6.07%
1999 - 2009 Minimum	3.37%	1.14%	2.26%	2.62%
2000 - 2009 Maximum	13.83%	9.90%	16.80%	9.10%

Number of Fish Released				Weighted Ave
AFK	CCH	WNH	Grand Total	Marine Survival
52,384,532	136,838,852	106,440,456	295,663,840	7.82%
105,974,235	137,571,564	103,675,208	347,221,007	7.57%
133,156,995	131,195,588	127,355,213	391,707,796	5.64%
142,537,692	132,236,317	116,069,339	390,843,348	3.61%
150,287,930	139,226,716	127,650,249	417,164,895	3.59%
155,982,828	138,626,713	106,229,524	400,839,065	8.28%
146,407,222	135,584,680	119,553,743	401,545,645	2.66%
174,371,351	136,288,850	109,640,296	420,300,497	7.80%
131,197,783	126,575,805	84,060,920	341,834,508	3.57%
159,616,613	138,157,160	84,795,328	382,569,101	8.03%
179,000,000	141,000,000	77,200,000	397,200,000	6.51%
144,000,000	131,000,000	136,000,000	411,000,000	4.20%
145,000,000	141,000,000	128,000,000	414,000,000	12.20%
149,000,000	139,000,000	136,000,000	424,000,000	
		1998 - 2009 Average		5.77%
		1999 - 2009 Minimum		2.66%
		2000 - 2009 Maximum		8.28%

Attachment 4.
2010 PWSAC Pink Salmon Harvest Summary

Species	Pink
Return Year	2010

	Data				
Hatchery	Sum of CPF Harvest	Sum of Hatchery Harvest	Sum of Broodstock	Sum of Unharvested	Sum of Total Return
AFK	12,906,736	704,355	161,013	7,700	13,779,804
CCH	18,932,530	374,792	179,115	5,000	19,491,437
WNH	15,465,670	1,573,529	199,202	5,000	17,243,401
Grand Total	47,304,936	2,652,676	539,330	17,700	50,514,642
	94%	5%	1%	0%	